Pollution Prevention Challenge Grants

Below is a list of Pollution Prevention Challenge grants given by IDEM's Office of Pollution Prevention and Technical Assistance. The grants are listed according to the industry mostly impacted by the grant project. Information listed includes: amount of grant, what the project entailed, and the status and outcomes of the project.

AUTOMOTIVE MAINTENANCE	
P2 Curriculum	1996
Monroe County Solid Waste Management District	Grant Amount: $13,050
Bloomington, IN	Status: Completed
Purpose of Project:	The Monroe County Solid Waste Management District created P2 training materials for students studying automotive maintenance at vocational schools.
Results:	In August, 1997, the "Automotive Materials Management" supplemental educational materials were delivered to the Hoosier Hills Area Vocational School for a pilot program for the 1997-1998 school year. Impact of the new materials will be analyzed at the beginning of the next school year.

P2 Curriculum	1996
IVY Tech State College	Grant Amount: $25,000
Northwestern Region, IN	Status: On-going
Purpose of Project:	Ivy Tech State College will create a P2 training program for vocational technical instructors, automotive refinishers, and autobody shop owners.
Results:	The project is currently on-going. Training materials have been developed. A seminar on "Train Your Trainer" will be held July 28th from 5:30 to 9:30 p.m. in Merrillville. For more information, please contact Art Tuesbury at (219) 981-4428.

Degreasing	
Aqueous Cleaning	1995
Allison Engine Company, Inc.	Grant Amount: $12,550
Indianapolis, IN	Status: Completed
Purpose of Project:	Allison Engine Company Inc. developed an aqueous cleaning process as an alternative to methylene chloride vapor degreasing.
Results:	The project was successful. The use of methylene chloride has begun to be phased out. They reduced their chlorinated solvent releases by 30,000 pounds per year. Five new cleaning systems will be installed by January, 1999.

Electroplating	
Non-Cyanide Zinc Plating	1996
Greene Manufacturing Company	Grant Amount: $35,000
Connersville, IN	Status: Contract Expired
Purpose of Project:	This grant was to test non-cyanide zinc plating materials in the electroplating industry.
Results:	The contract expired November, 1997. No products or results were produced.

Hydrochloric Acid	1997
Elco Textron	Grant Amount: $10,000
Logansport, IN	Status: Contract Expired
Purpose of Project:	Elco Textron is testing ways to reduce the use of and worker exposure to hydrochloric acid. It would also like to reduce industrial wastewater generation at its electroplating plant. They estimate a reduction of 86,000 lbs/yr of hydrochloric acid.
Results:	The project is over with no results.

Chromium Removal	1996
Best Lock	Grant Amount: $13,600
Indianapolis, IN	Status: On-going
Purpose of Project:	This grant was to allow Best Lock to install innovative equipment which removes chromium from rinse water. Best Lock estimated a reduction in chromic acid of 5,400 lbs. per year.
Results:	Best Lock found that a cobalt bath is not sufficient. The project is nearing completion.

Fiberglass Product Manufacturing	
Closed Tooling	1996
Holiday Rambler	Grant Amount: $30,000
Wakarusa, IN	Status: Contract Expired
Purpose of Project:	Holiday Rambler planned on developing a closed tool, vacuum press, fiberglass production system. This system was estimated to reduce styrene use by 95%.
Results:	Due to restructuring of the company, the contract expired with no products or results produced.

Flow Coating	1997
Altec Engineering	Grant Amount: $25,000
Wakarusa, IN	Status: Completed
Purpose of Project:	The flow coating system has not been widely accepted among fiberglass shops in Elkhart and surrounding counties as an effective technology for open mold fiberglass operations. This project is an attempt to solve the problems involved in using the flow coating system by testing it in a typical Elkhart production shop and not a laboratory. Objectives: • Prove the feasibility of the flow coating systems in the open mold fiberglass industry. • Document the materials cost savings with the use of the flow coating system. • Compare different flow coat systems for ease of use by sprayers. • Document quality problems and production difficulties with the flow coat molding system.
Results:	Project completed. Contact OPPTA at (800) 451-6027 ext. 2-8172 or (317) 232-8172 for a copy of the final report.

Foam Manufacturing	
Heptane	1997
Syndicate Sales, Inc.	Grant Amount: $18,800
Kokomo, IN	Status: On-going
Purpose of Project:	Syndicate Sales Inc. is substituting heptane for hexane, a hazardous air pollutant in the manufacture of floral foam.
Results:	Project is on-going. Syndicate Sales Inc. has been granted a 6 month time extension.

Printing	
P2 Curriculum	1995
Ball State University and Taylor University	Grant Amount: $27,000
Muncie, IN Upland, IN	Status: Completed
Purpose of Project:	Ball State and Taylor Universities developed and tested a P2 training curriculum to show how Indiana industries may apply P2 in their specific operations.
Results:	Informational tapes concerning P2 and the printing industry were produced and are available to those in the industry.

Surface Coating	
Hot Melt Coating	1995
Wabash National Corporation	Grant Amount: $25,000
Lafayette, IN	Status: Completed
Purpose of Project:	Wabash National Corp. conducted a pilot test of hot melt coating technology in place of solvent-based corrosion coating for crossmembers on semi-trailers. They planned to eliminate the use of 234 tons of solvent-based paint and 10,000 lbs of ignitable wastes.
Results:	The hot-melt coatings, although promising in lab tests, were found inferior to solvent based coatings in field tests. No further research is planned at this time.

Environmental Audits	1997
Purdue University	Grant Amount: $50,000
West Lafayette, IN	Status: On-going
Purpose of Project:	This grant encourages small and medium sized manufacturers to use the P2 services available from Purdue University's Coating Application Research Laboratory (CARL).
Results:	The project is on-going. CARL has completed work with one company, helping them switch to a water-based coating with an annual emissions reduction of 1-2 tons. Eight more companies will be working with CARL, 9 additional companies are being evaluated.

Wastewater Treatment	
Environmental Audits	1995
Notre Dame University	Grant Amount: $26,217
South Bend, IN	Status: Contract Expired
Purpose of Project:	Notre Dame conducted environmental audits and recommended P2 opportunites for 46 significant industrial users of the Elkhart wastewater treatment plant.
Results:	Final Report received. Contact OPPTA at (800) 451-6027 ext. 2-8172 or (317) 232-8172 for a copy of the final report.

Environmental Audits	1997
Millennium Environmental	Grant Amount: $25,890
Waterville, OH	Status: On-going
Purpose of Project:	The goal of this grant is to educate municipal wastewater treatment operators about P2, enabling them to work with their industrial customers to implement P2.
Results:	This project is on-going. Millennium Environmental and IDEM have held the first workshop for POTW operators in December. Four 1-day workshops are also planned.

Wood Furniture	
Water-Based Coatings	1995
Executive Furniture	Grant Amount: $14,000
Huntingburg, IN	Status: Completed
Purpose of Project:	Executive Furniture wanted to formulate and test water-borne finish alternatives that could replace solvent finishes.
Results:	They found that water-based topcoats are still inferior to solvent-based. The company has switched to non-solvent cleaners and a water-based filler. This reduced VOC emissions by 20% annually.

Low VOC Coatings	1996
Purdue University	Grant Amount: $29,140
West Lafayette, IN	Status: On-going
Purpose of Project:	This grant is for research on the use of low- to no-VOC coatings for wood products.
Results:	This project is on-going. Testing of low- to no-VOC coatings is ready to begin. Purdue has requested a no cost, one year time extension.

Printing Plate Washes	
Solvent Substitutions	1995
James River Corporation	Grant Amount: $25,000
Indianapolis, IN	Status: Completed
Purpose of Project:	James River Corp. tested switching from a hazardous solvent wash to a water wash in printing plates.
Results:	The project was successful. They had a 26 tons per year reduction of VOCs. James River is now applying the technology to other projects.

CESQG and SQG Reference Manual	
P2 Curriculum	1995
Monroe County Solid Waste Management District	Grant Amount: $23,000
Bloomington, IN	Status: Completed
Purpose of Project:	This grant was established to determine how P2 programs might be applicable to the approximately 400 conditionally exempt small quantity generators in Monroe County.
Results:	The Monroe County Solid Waste Management District produced an excellent reference manual for small quantity generators. They also conducted 20-30 on-site visits with small quantity generators such as drycleaners, autobody shops, and printers.

Gaskets	
P2 Curriculum	1995
Purdue University	Grant Amount: $14,500
West Lafayette, IN	Status: Discontinued
Purpose of Project:	This grant was to develop and distribute technical guidance manuals on the proper selection and installation of gaskets in high-performance applications.
Results:	Purdue University opted to discontinue.

Chemical Manufacturing	
Metal Sealer	1996
Madison Chemical	Grant Amount: $30,000
Madison, IN	Status: On-going
Purpose of Project:	Madison Chemical is developing a metal sealer that does not contain chromium, molybdenum, or similar toxic metals.
Results:	On-going.

Statewide Measurement	
Assess P2 Effectiveness Statewide	1996
Taylor University	Grant Amount: $12,877
Upland, IN	Status: Completed
Purpose of Project:	This grant was used to analyze the usefulness of the Toxic Release Inventory and materials accountinng data to assess the effectiveness of IDEM's statewide P2 programs.
Results:	Taylor University created maps showing TRI data. The maps are currently being used by OPPTA staff. By understanding what and where chemicals in environmental waste are generated and managed, opportunites for P2 are enhanced and priorities and initiatives are better determined. The maps are an excellent reference for citizens interested in TRI sites and pollutants around them. Visit Taylor's website for a view of the maps.

Distribution of TRI Chemicals	1997
Taylor University	Grant Amount: $18,100
Upland, IN	Status: Completed
Purpose of Project:	The purpose of this grant is to develop maps using the Chemical Hazard Ranking System to show distribution of toxic chemicals throughout Indiana.
Results:	This project is a continuation of the 1996 P2 grant. The project is on- going.

Foundry's	
Electric Induction Furnaces	1997
Akron Foundry	Grant Amount: $24,000
Akron, IN	Status: On-going
Purpose of Project:	This grant allows Akron Foundry to develop services to replace a cupola furnace with two significantly less polluting electric induction furnaces.
Results:	The project is on-going. The two new electric furnaces went on-line in October, 1997. Carbon monoxide emissions are estimated to be reduced by 223 tons per year. The total emission reductions goal is 225 tons per year.